Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	**)**	
	)	
Petitions Filed by the Boulder Regional	**)**	PS Docket No. 19-254
Emergency Telephone Service Authority	**)**	
	)	

To: The Commission

REPLY COMMENTS OF THE DIGITAL DECISION

The Digital Decision (TDD) welcomes this opportunity to respond with reply comments to the Public Notice issued by the Federal Communications Commission's ("FCC/Commission") Public Safety and Homeland Security Bureau.[1] The Notice seeks comment on petitions for Declaratory Ruling and a Notice of Proposed Rulemaking (NPRM) or Notice of Inquiry (NOI) filed by the Boulder Regional Emergency Telephone Service Authority (BRETSA).[2]

TDD remains steadfast in support of interoperable communications for our nation's first responders, as AT&T/FirstNet and other comparable public safety wireless carrier services providers offer priority and preemption through a dedicated public safety network core, and, as a result, each network is likely to serve a significant number of public safety customers. Given that

[1] *Public Safety and Homeland Security Bureau Seeks Comment On Petitions Filed By The Boulder Regional Emergency Telephone Service Authority*, Public Notice, PS Docket 19-254, DA 19-902 (Sept. 11, 2019)**;**

[2] Boulder Regional Emergency Telephone Service Authority Petition for Reconsideration, or in the Alternative, Petition for Declaratory Ruling and Petition for Rulemaking, PS Docket No. 16-269, PS Docket No. 12-94, PS Docket 06-229, WT Docket No. 06-150 (filed Nov. 21, 2018) (BRETSA Petitions).

communications between these different networks are expected, especially during an event where you have multiple jurisdictions responding, full interoperability is required between the networks.

The authority exists for the Commission to address the BRETSA petitions as FirstNet is a Commission spectrum licensee. Thus, we respectfully ask that the FCC act now and grant BRETSA's Declaratory Ruling request that addresses today's critical need for interoperability. Also, we urge the Commission to issue an NPRM or NOI addressing and clarifying the other essential issues for public safety in the FCC's Notice.

I. Introduction

The majority of commenters[3] in this proceeding agree that interoperability is a fundamental responsibility of FirstNet and that FirstNet should support interoperability at all levels, including network, services, applications, and devices ensuring interoperability and promote the development of a public safety ecosystem that is open and interoperable. The Commission should also recognize that there is strong evidence of State and Local support for interoperability based on their independent decisions to require interoperability in their procurements, *e.g.*, the City of Houston, Commonwealth of Massachusetts, CaLNet, City of Colorado Springs, and NASPO.[4]

II. Interoperability is Critical to Public Safety

Public Safety officials across the country understand the importance of interoperable communications. Equally clear are the widespread communications interoperability problems that have plagued Public Safety for decades. While significant events such as Hurricane Katrina and the

[3] *See* comments by the Southern Linc & C Spire, Verizon, Boulder Regional Emergency Telephone Service Authority, Minnesota Department of Public Safety Emergency Communication Networks, and Mutualink, Inc.

[4] For example the following jurisdictions required interoperability in their solicitations for public safety broadband networks: The City of Houston's RFP released on October 4, 2019, and the solicitation is due on October 31, 2019; Commonwealth of Massachusetts RFR was due on October 30, 2018; CalNet RFP was due on December 21, 2018; Colorado Springs RFP was due May 20, 2019; and the NASPO RFP was due on September 24, 2018.

terrorist attacks of 9/11 brought critical public attention to this problem, it is not a problem that manifests itself only during significant events. It is a problem that Public Safety agencies face every day, and that has the potential to occur whenever different agencies converge on the scene of an incident.

As Mutualink noted in its comments, this widespread communication interoperability problem has resulted from a long legacy of proprietary communications solutions.[5] These proprietary legacy solutions must be replaced with an open, standards-based, and fully interoperable Public Safety communications ecosystem, consistent with Congress' direction, if Public Safety communications interoperability is to be assured. While States and local jurisdictions are rightfully seeking to establish interoperability via procurement requirements, we risk a fractured and non-standard interoperability approach that repeats the public safety communications mistakes of our past. The FCC must act to avoid a non-standard approach to interoperability.

It is also well understood that enabling effective communications across disparate systems or networks is an inherent attribute of interoperability. Indeed, it is the very definition of interoperability. Thus, to fulfill its interoperability mandate, FirstNet must facilitate effective communications with other systems and networks used by Public Safety.

As BRETSA, the Minnesota Department of Public Safety, and Mutualink each recognize, Public Safety operation in a multi-network environment is both a present reality and a future expectation. Today, Public Safety uses a variety of different land mobile radio ("LMR") and commercial LTE networks, and will likely use new networks (e.g., 5G) in the future. Interoperability between and among all of these networks must be assured to ensure effective communications and continued innovation for Public Safety.

[5] Comments of Mutualink at 3-4.

More than 23 years are remaining on FirstNet's contract with AT&T, and we can expect to see tremendous technological advancements during that time. It is both unreasonable and contrary to public safety's interest for FirstNet to reject the need for comprehensive communications interoperability and thereby not to take full advantage of the communications ecosystem for First Responders. In addition to establishing the interoperability framework described herein, TDD believes that the FCC should consider periodic reviews to assess FirstNet's progress in leveraging emerging technologies to ensure they are introduced in a responsible and interoperable way.

III. FirstNet to FirstNet Interoperability Does Not Solve Public Safety's Problem

FirstNet and AT&T each acknowledge that FirstNet has a responsibility to ensure the interoperability of the nationwide public-safety broadband network (NPSBN), and each claim that FirstNet has already satisfied this obligation. As outlined in BRETSA's petitions and made in comments filed by FirstNet and AT&T, AT&T's commitment to interoperability is limited to supporting interoperable communications across the FirstNet network ("FirstNet-to-FirstNet interoperability") and does not include full interoperability with other networks used by public safety.

FirstNet and AT&T attempt to distinguish FirstNet-to-FirstNet interoperability and the "full interoperability" that BRETSA requests by pointing to provisions in the law that require interoperability between FirstNet and any State that opts out of FirstNet and build its radio access network ("RAN"). Since no State opted out, they argue, there is no obligation to provide any form of interoperability other than FirstNet-to-FirstNet interoperability.

We disagree with this characterization of FirstNet's interoperability mandate. FirstNet's charge and the very reason for FirstNet's existence are to ensure interoperable communications for the Nation's first responders. We believe that there should not be a distinction between "interoperability" and "full interoperability" when talking about Public Safety communications. Public Safety

communications should be fully interoperable to ensure that Public Safety can fulfill its mission. Congress, and indeed the Public Safety community, did not work to establish FirstNet to provide limited interoperability for public safety.

It is worth noting that FirstNet and AT&T do not even serve the majority of public safety users today.[6] Consequently, limiting FirstNet's customers to interoperability only with other FirstNet customers would severely hinder their communications and undermine the mission of emergency responders. Given that public safety agencies use different commercial broadband networks for their communications needs, it is essential that FirstNet support full interoperability with all networks used by public safety.

IV. Full Interoperability Requires Establishment of a Comprehensive Framework

AT&T claims that FirstNet already provides interoperability today because "NPSBN users and commercial network users can communicate with one another using voice, text, and email." However, interoperability is not merely the ability to complete a voice call, send a text or exchange data files between different networks. Full interoperability must also ensure that the functionality and capabilities of the services provided to Public Safety be maintained while traversing various networks. To achieve these objectives are met, TDD recommends the establishment of a comprehensive interoperability framework that meets the following criteria.

First, any interoperable Public Safety communications solution should adhere to open and global standards developed by the Third-Generation Partnership Project (3GPP) and other relevant

[6] *See* comments of Randall L. Stephenson - AT&T Inc. - Chairman, CEO & President, July 24, 2019 investor call. "The first responder community is a rather large market, and it's a market where we come into it with very small share;" John Joseph Stephens - AT&T Inc. - Senior EVP & CFO "Brett, we think of the first responder community as 3 million potential, we participate very little of that."

standards organizations. Adherence to such standards is essential to enabling interoperability of devices, radio access networks (RANs), and core network elements that leverage ever-evolving, commercially available products and services. It was also a requirement that Congress imposed on FirstNet, and experts widely recognize it as critical to Public Safety interoperability. As noted by Tony Gray, CEO of The Critical Communications Association, it is essential "that a standards-compliant solution is used by everyone to ensure the emergency response isn't compromised by a lack of interoperability between agencies."[7] Interoperable solutions should be standards-based non-proprietary multivendor tested solutions that "create competition, which helps keep prices low, encourages innovation, and spurs a faster development cycle for new products."[8]

Full interoperability must also include support for the following communications functions:

Priority and Preemption – Priority services should allow for the assignment of Quality of Service (QoS) treatment for user profiles using the standard service control parameters defined by 3GPP, including Access Class, Quality Class Indicator (QCI), Allocation and Retention Priority (ARP), and Differentiated Service (Diff Serve). Network providers must support the inter-carrier sharing of QoS parameters and agree to recognize, honor, and map these parameters to ensure proper treatment as Public Safety communications traverse different networks.

Mission Critical Point-to-Point (MCPTT) – MCPTT should be supported via a standard interface (not merely via over-the-top applications). It should enable the effective integration of MCPTT services across multiple LTE networks and with existing land mobile radio (LMR) networks, and use open standards such as 3GPP's MCPTT, mission-critical data (MCData), and mission-critical video (MCVideo) specifications.

Device-to-Device (D2D) Communications – MCPTT services should support direct mode communications between two devices without the need to access the RAN or Core Network. D2D communications should comply with 3GPP standards and protocols.

Application Ecosystem – Public Safety applications should be non-proprietary, interoperable, and based on open standards, and available to all developers. Applications should also be available to all Public Safety users, regardless of the network they use.

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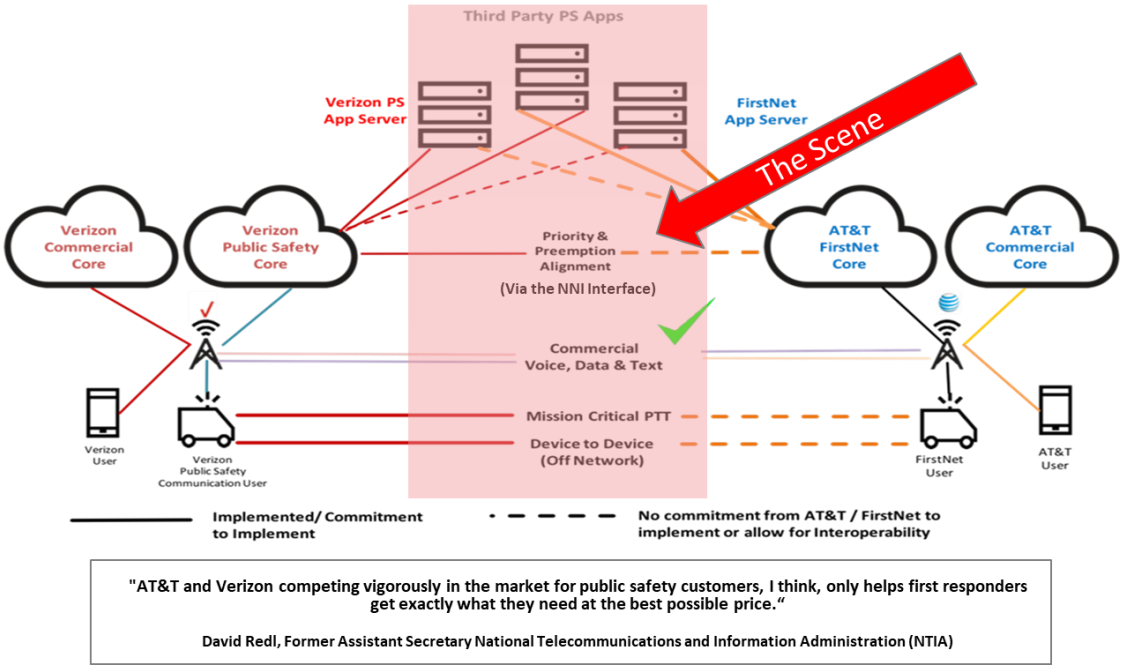
[7] See Mission Critical Communications article, *Why MCPTT Interoperability is Vital for Public Safety*, February 04, 2019, by Tony Gray, chief executive TCCA.

[8] *Id.*

TDD believes that support for each of these areas is critical to ensure full interoperability across all networks used by Public Safety. A graphic depicting the comprehensive interoperability framework that TDD proposes is shown below.

Public Safety Comprehensive LTE Interoperability



"AT&T and Verizon competing vigorously in the market for public safety customers, I think, only helps first responders get exactly what they need at the best possible price."

David Redl, Former Assistant Secretary National Telecommunications and Information Administration (NTIA)

Contrary to AT&T's assertion, interoperability does not require FirstNet to integrate its network core with the network core of other commercial network providers, nor does it authorize those providers to utilize the Band 14 spectrum licensed to FirstNet. Thus, TDD does not believe that establishment of the comprehensive interoperability framework described above would in any way undermine the agreement between FirstNet and AT&T.

Finally, earlier this year, based on the Department of Homeland Security (DHS) CISA Wireless Priority Service (WPS) contractual requirements, Verizon and AT&T completed a successful implementation of QoS interoperability between both networks when using DHS WPS provisioning. This interoperability now allows a WPS enabled First Responder's voice traffic to retain the QoS QCi

parameters through both carrier's LTE networks. It demonstrates how critical DHS CISA views priority interoperability between carrier networks. Now, what about data QoS parameter sharing? DHS interoperability around WPS serves as an example of full interoperability. Similar to what DHS CISA mandated through contractual agreements with each carrier, the FCC needs to compel FirstNet to assume the responsibility for complete interoperability. FirstNet collaboration with carriers to solve interoperability via QoS, Priority & Preemption, Push to Talk/MCPTT, mobile applications, Identity, and Credentialing Access Management, also using 5G.

V. Fulfillment of FirstNet's Mission Requires Full Interoperability

FirstNet states that the imposition of an interoperability requirement would harm the FirstNet program and effectively redesign the FirstNet mission. TDD disagrees.

As we've already noted, and other commenters have clearly stated, achieving interoperability is the very definition of FirstNet's mission. FirstNet cannot accomplish its purpose if it does not ensure that Public Safety communications are fully interoperable, both across the NPSBN and with other networks used by Public Safety.

FirstNet contends that the imposition of an interoperability requirement would have the unintended consequence of modifying the public-private agreement it has with AT&T, though it provides no details to support that claim.

TDD believes there is no reason to think that such a modification would be necessary. At its core, that contractual agreement relates to AT&T's obligation to build and operate a network for FirstNet's use in serving Public Safety users while allowing AT&T to utilize excess capacity on the network to serve AT&T's commercial customers.

In TDD's view, an interoperability requirement need not change that basic agreement. Of course, the contractual agreement between FirstNet and AT&T has never been made public, and this

lack of transparency makes it difficult to make any judgment about how interoperability would affect FirstNet operations. Given Congress' mandate, one can presume (hopefully) that the contract is designed to promote the open, standards-based, and interoperable framework that Congress sought to achieve and does not encourage the continuation of the proprietary communications solutions that have plagued Public Safety. TDD invites FirstNet to submit its agreement with AT&T to the FCC for inclusion in the record, or to at least provide some details on what an interoperability requirement would undermine specific provisions of its agreement.

VI. AT&T/FirstNet Mischaracterizes Opt-Out Under the Law

FirstNet suggests that interoperability with other networks is not necessary because all 55 States and territories and the District of Columbia "opted-in" to the FirstNet network, and that an interoperability obligation imposed on FirstNet would undermine these agreements. Importantly, there is no reference in the law to "opting in" to FirstNet and no requirement to use the FirstNet network for those States that do.

Congress included provisions in the law to allow States to "opt-out" of FirstNet because it wanted to ensure that States had the opportunity to build their RAN using the Band 14 spectrum licensed to FirstNet, rather than having FirstNet build that network within their state. TDD is very familiar with these provisions because its founder, Robert LeGrande II, assisted Congressional staff in drafting these provisions. Despite the importance of these provisions, no State chose to "opt-out" due to the obligations of building, operating, and maintaining their network, as well as other conditions imposed by FirstNet.

In characterizing the decisions of the States as "opting in," FirstNet attempts to create the impression that States have made an affirmative decision to use the FirstNet network and that agencies within the State are obligated to do likewise. There is no such obligation. State decisions to "opt-in"

were decisions not to "opt-out." They were agreements by the States to allow FirstNet and its contractor (AT&T) to build the Band 14 RAN within their respective States and not agreements to use the FirstNet network. All States, territories, and the District of Columbia, as well as all agencies within those jurisdictions, retain the right to use whichever communications network they choose.

Contrary to FirstNet's claim, the "opt-out" provisions established by Congress argue in favor of interoperability not against it. Congress acted to ensure that public safety agencies retain their right to choose their communications service provider. Given the likelihood that networks other than the FirstNet/AT&T network will continue to be used by public safety and national security agencies, interoperability among all of these networks is an imperative if interoperable communications are to be assured for all first responders.

VII. Immediate FCC Action is Necessary to Ensure Future Interoperability

TDD urges the FCC to act quickly to grant BRETSA's petitions. The importance of interoperable Public Safety communications and Congress' intention that FirstNet support interoperability is both clear. Equally clear, from reading the comments of FirstNet and AT&T, it is that neither intends to support the interoperability that Public Safety requires absent a requirement to do so by the FCC.

As SouthernLink states, "holding FirstNet accountable for achieving interoperability is a critical national priority, not an indistinct future goal." Allowing the present lack of interoperability to continue will ultimately threaten the ability of Public Safety to protect the public in times of emergency. The FCC must take action to ensure that the proprietary communications of Public Safety's past are relegated to the past and that Public Safety's future is one guided by a communications framework that is open, standards-based, and ensures interoperability across all networks, services, and applications.

VIII. Conclusion

As we unfortunately learned, emergency communications failures during the 9/11 attacks cost first responder and civilian lives. The communications systems of emergency first responders were not interoperable across jurisdictions, disciplines, and networks. As 9/11 showed, interoperability is critical to public safety communications, and ensuring interoperability is essential. We should be proactively ensuring that our nation's first responders can communicate across all networks and should not be waiting for a major incident to occur to learn the lessons of 9/11 yet again. Thus, we urge the FCC to act quickly on BRETSA's Declaratory Ruling request that addresses today's critical need for interoperability, and we urge the Commission to issue an NPRM or NOI addressing and clarifying the other essential issues for public safety in the FCC's Notice.

Respectfully submitted,

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